US Atlas & Facilities at BNL

Bruce Gibbard

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FY ‘99 US Atlas Facility Support at BNL

- BNL LDRD-like funding available for FY ‘99
  - Equipment - **Described later**
  - System Administration Position
    - **Open and recruiting in progress**
  - Management & Additional Sys Admin position - **Needed**
- Aligned use of established RHIC computing infrastructure
  - Physical site
  - Networking
  - OS/Environment support

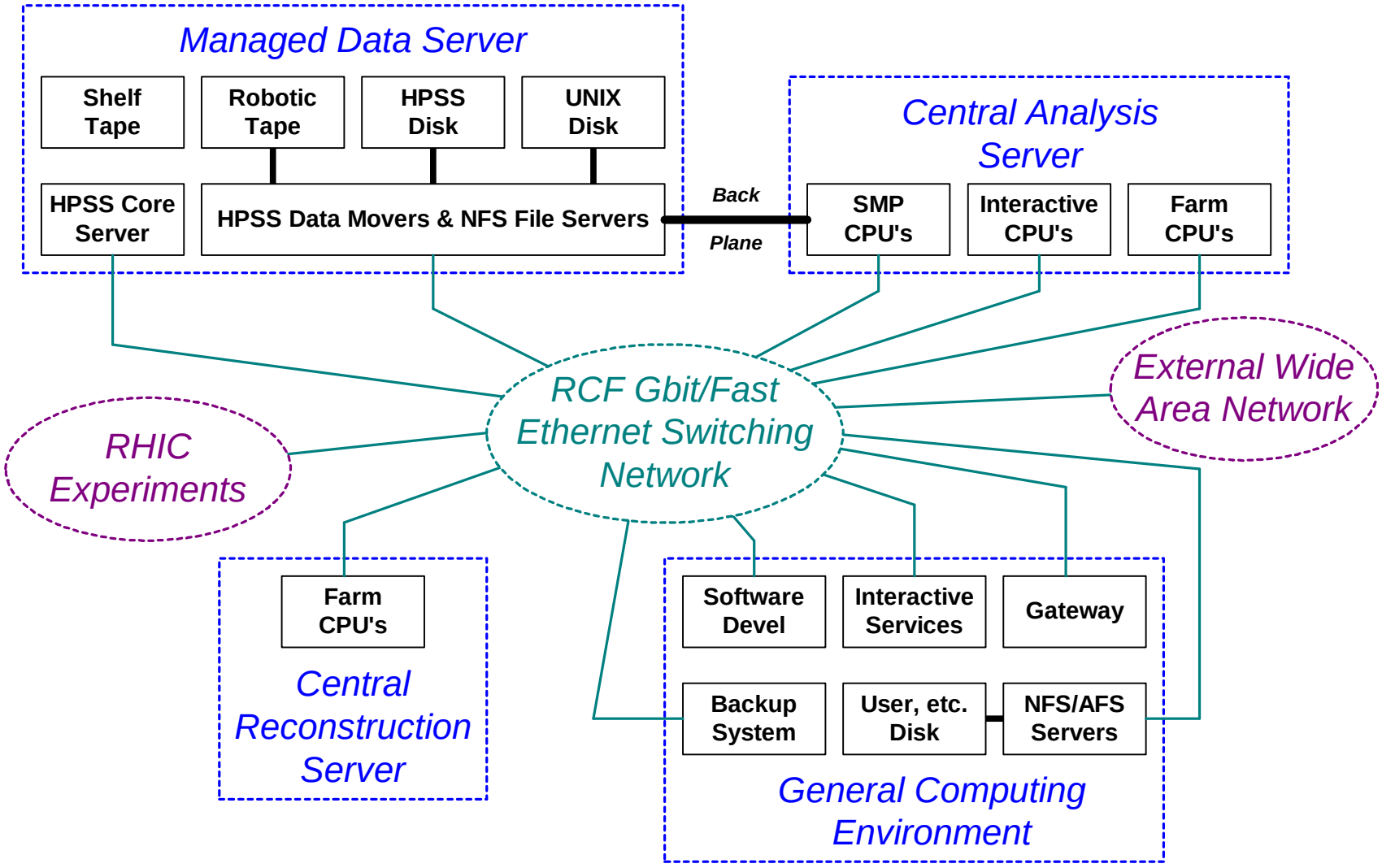
RHIC Computing Facility (RCF)

- Dedicated Facility With Strong User Participation
  - Principle component of Wide Area multi-site RHIC computing plan
  - User developed requirements document
  - User participation in initial planning
  - Quarterly 2 day User meetings
    - Plans and Progress
    - Requirements revisions
    - Technology discussions
  - Weekly liaison meetings
  - Ad Hoc topical task forces/working groups
  - User participation on facility advisory committee

RHIC Computing Facility (Continued)

- Principle Hardware Components
  - Platforms - Linux/Intel and Solaris/Sun
  - Tape/Robotics - StorageTek: SD-3, 9840 / Silo
  - Network - Fast/Gigabit /Large Frame Gigabit Ethernet
- Infrastructure Tools
  - HSM - HPSS +
  - Databases - Objectivity, Oracle, MySQL
  - WAN Code/Data Distribution - AFS
  - Resource management (batch) - LSF +
  - Data Mining - HENP Grand Challenge +

RHIC Computing Facility

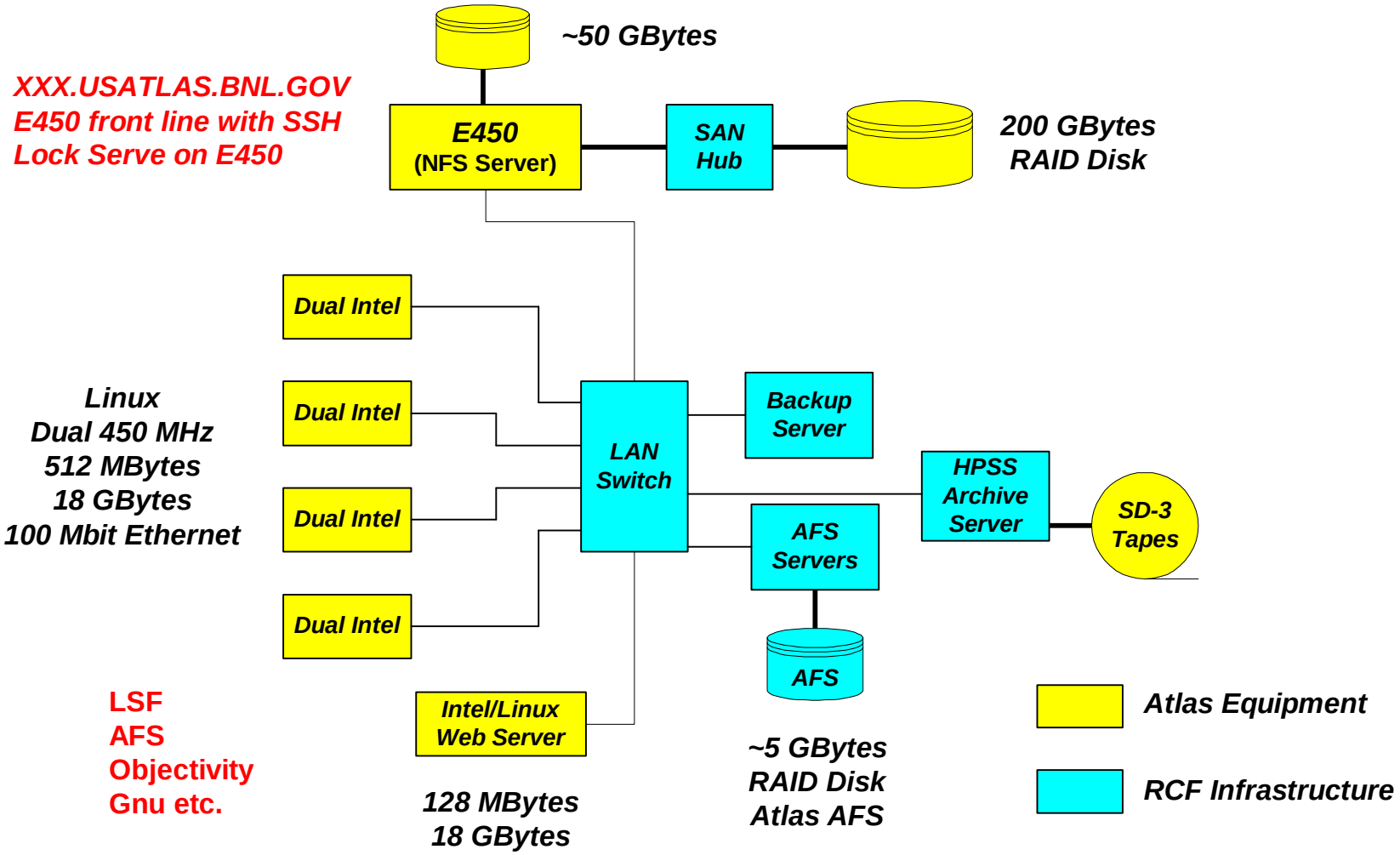


Facility Upgrades 7-8/1999

	RCF	RCF	US Atlas	US Atlas
	May '99	Sept '99	Aug '99	FY '00
				(Suggested)
Intel/Linux Farm				
Boxes	59	203	4	50
CPU's	136	424	8	100
SPECint95's	1,700	7,000	300	2,000
Data Disk				
Volume (TB)	1.6	9	0.2	1.2
Disk Technology	JBOD	RAID 3/5	RAID 5	RAID 5
Disk Connectivity	SCSI	FibreChannel	FibreChannel	FibreChannel
Tape System				
Robotic Capacity (Tapes)	6,000	6,000	Small	Small
SD-3 Drives	10	11	Small	0
9840 Drives	0	10	0	2
Data Server Systems				
HPSS CPU's	4	16	0	0
Solaris CPU's	6	22	2	4
Connectivity	Fast Ethernet	Gigabit Ethernet	Fast Ethernet	Gigabit Ethernet

Atlas at BNL

Near Term (August '99)
Computing Facilities



US Atlas Computing

- Current Ad Hoc Deployment of Computing Facilities Is Not Long Term Viable
- Specification of the Requirements for US Atlas Computing Facilities is Needed Soon
- Development of Facilities Plan Further Requires
  - Understanding of funding sources & constraints
    - DOE, NSF
  - Understanding of relationship between US Atlas computing and other Atlas computing components
- Computing Facilities Plan Includes
  - Tier 1, Tier 2, Institutional, Desktop, & Network

US Atlas Computing

- Facilities Session Tomorrow Will Go into More Depth on These Issues
- Following this talk:
  - Srini Will Next describe the Computing Environment Established on Exist Equipment
  - Then Short Tour of RHIC Computing Facility Will Be Available for Those Interested